

**FSIS Microbiological Testing Program for *Salmonella* in Pasteurized Egg Products, Calendar Years 1995–2013: Tables and Figures**

Table 1a. Percent Positive (%) of <i>Salmonella</i> in Pasteurized Egg Products CY 1995-1999 (Liquid, Frozen or Dried Egg Products)								
Year	Egg Whites <sup>(1)</sup>	Whole Eggs <sup>(2)</sup> or Yolks <sup>(2)</sup>	Whole Eggs with Added Yolks or Whole Egg Blends	Whole Eggs <sup>(3)</sup> or Yolks <sup>(3)</sup>	Dried Yellow Egg Products	Spray Dried Egg Whites <sup>(1)</sup>	Pan Dried Egg Whites	Summary by Year
1995	1.35 (1/74) <sup>(4)</sup>	1.05 (1/95)	2.90 (2/69)	2.67 (2/75)	0.00 (0/27)	0.00 (0/26)	0.00 (0/2)	1.63 (6/368)
1996	0.23 (1/433)	0.51 (3/593)	0.37 (1/270)	1.30 (6/462)	0.65 (1/155)	0.59 (1/170)	0.00 (0/11)	0.62 (13/2,094)
1997	0.24 (1/412)	0.71 (4/564)	0.40 (1/249)	1.11 (5/449)	0.68 (1/147)	0.00 (0/164)	0.00 (0/13)	0.60 (12/1,998)
1998	0.55 (2/366)	0.57 (3/529)	0.91 (2/220)	0.51 (2/394)	0.70 (1/142)	0.00 (0/150)	0.00 (0/11)	0.55 (10/1,812)
1999	1.45 (5/345)	0.40 (2/504)	0.00 (0/196)	1.29 (5/389)	1.49 (2/134)	0.00 (0/130)	0.00 (0/12)	0.82 (14/1,710)

<sup>(1)</sup>With or without added ingredients.

<sup>(2)</sup>With less than 2% added ingredients other than salt or sugar.

<sup>(3)</sup>With more than 2% salt or sugar added.

<sup>(4)</sup>(Number positive/number analyzed x 100) in 100 grams of tested product.

Note: For convenient viewing, Table 1 has been divided into different CY time ranges.

**Table 1b. Percent Positive (%) of *Salmonella* in Pasteurized Egg Products CY 2000-2009\*  
(Liquid, Frozen or Dried Egg Products)**

<b>Year</b>	<b>Egg Whites<sup>(1)</sup></b>	<b>Whole Eggs<sup>(2)</sup> or Yolks<sup>(2)</sup></b>	<b>Whole Eggs with Added Yolks or Whole Egg Blends</b>	<b>Whole Eggs<sup>(3)</sup> or Yolks<sup>(3)</sup></b>	<b>Dried Yellow Egg Products</b>	<b>Spray Dried Egg Whites<sup>(1)</sup></b>	<b>Pan Dried Egg Whites</b>	<b>Summary by Year</b>
<b>2000</b>	1.39 (5/360) <sup>(4)</sup>	0.00 (0/534)	0.00 (0/207)	0.27 (1/370)	0.00 (0/154)	0.00 (0/124)	0.00 (0/12)	0.34 (6/1,761)
<b>2001</b>	1.17 (4/342)	0.21 (1/486)	0.00 (0/194)	0.00 (0/366)	0.74 (1/136)	0.00 (0/121)	0.00 (0/11)	0.36 (6/1,656)
<b>2002</b>	0.85 (3/355)	0.00 (0/480)	0.00 (0/183)	0.29 (1/344)	2.08 (3/144)	0.00 (0/129)	0.00 (0/12)	0.43 (7/1,647)
<b>2003</b>	0.00 (0/346)	0.00 (0/458)	0.00 (0/180)	0.93 (3/324)	1.61 (2/124)	0.00 (0/116)	0.00 (0/12)	0.32 (5/1,560)
<b>2004</b>	0.61 (2/330)	0.22 (1/450)	0.00 (0/169)	0.85 (3/352)	0.00 (0/124)	0.00 (0/122)	0.00 (0/11)	0.39 (6/1,558)
<b>2005</b>	0.00 (0/365)	0.00 (0/433)	0.55 (1/182)	0.28 (1/359)	0.00 (0/129)	0.00 (0/129)	0.00 (0/13)	0.12 (2/1,610)
<b>2006</b>	0.30 (1/331)	0.24 (1/421)	0.00 (0/169)	0.00 (0/327)	0.00 (0/122)	0.00 (0/121)	0.00 (0/10)	0.13 (2/1,501)
<b>2007</b>	0.30 (1/332)	0.00 (0/419)	0.00 (0/154)	0.00 (0/301)	0.00 (0/109)	0.00 (0/94)	0.00 (0/12)	0.07 (1/1,421)
<b>2008</b>	0.29 (1/342)	0.45 (2/444)	0.00 (0/164)	0.29 (1/339)	0.00 (0/108)	1.01 (1/99)	0.00 (0/10)	0.33 (5/1,506)
<b>2009</b>	0.32 (1/313)	0.00 (0/430)	0.00 (0/149)	0.62 (2/325)	0.00 (0/111)	0.00 (0/102)	0.00 (0/11)	0.21 (3/1441)

\*Beginning with CY2008, annual microbiological results are reported by sample collection date as opposed to analysis end date to align the FSIS activities with those of their federal partners and to standardize reporting of yearly and quarterly results from the various microbiological verification programs. The results from 2008 onward cannot be compared with results from previous years because of the change in reporting.

<sup>(1)</sup>With or without added ingredients.

<sup>(2)</sup>With less than 2% added ingredients other than salt or sugar.

<sup>(3)</sup>With more than 2% salt or sugar added.

<sup>(4)</sup> $(\text{Number positive} / \text{number analyzed} \times 100)$  in 100 grams of tested product.

Note: For convenient viewing, Table 1 has been divided into different CY time ranges.

**Table 1c. Percent Positive (%) of *Salmonella* in Pasteurized Egg Products CY 2010-2013  
(Liquid, Frozen or Dried Egg Products)**

<b>Year</b>	<b>Egg Whites<sup>(1)</sup></b>	<b>Whole Eggs<sup>(2)</sup> or Yolks<sup>(2)</sup></b>	<b>Whole Eggs with Added Yolks or Whole Egg Blends</b>	<b>Whole Eggs<sup>(3)</sup> or Yolks<sup>(3)</sup></b>	<b>Dried Yellow Egg Products</b>	<b>Spray Dried Egg Whites<sup>(1)</sup></b>	<b>Pan Dried Egg Whites</b>	<b>Summary by Year</b>
<b>2010</b>	0.00 (0/310) <sup>(4)</sup>	0.24 (1/424)	0.00 (0/150)	0.33 (1/302)	0.00 (0/122)	0.00 (0/111)	0.00 (0/10)	0.14 (2/1429)
<b>2011</b>	0.66 (2/301)	0.24 (1/423)	0.00 (0/158)	0.00 (0/284)	0.79 (1/126)	0.00 (0/107)	0.00 (0/10)	0.28 (4/1409)
<b>2012</b>	0.59 (2/339)	0.23 (1/436)	0.00 (0/165)	0.00 (0/325)	0.00 (0/146)	0.00 (0/120)	0.00 (0/13)	0.19 (3/1544)
<b>2013</b>	0.62 (2/321)	0.00 (0/413)	0.00 (0/150)	0.00 (0/314)	0.00 (0/153)	0.00 (0/113)	0.00 (0/11)	0.14 (2/1475)

<sup>(1)</sup>With or without added ingredients.

<sup>(2)</sup>With less than 2% added ingredients other than salt or sugar.

<sup>(3)</sup>With more than 2% salt or sugar added.

<sup>(4)</sup>(Number positive/number analyzed x 100) in 100 grams of tested product.

Note: For convenient viewing, Table 1 has been divided into different CY time ranges.

**Table 1d. Percent Positive (%) of *Salmonella* in Pasteurized Egg Products CY 1995-2013\***  
(Liquid, Frozen or Dried Egg Products)

<b>Years</b>	<b>Egg Whites<sup>(1)</sup></b>	<b>Whole Eggs<sup>(2)</sup> or Yolks<sup>(2)</sup></b>	<b>Whole Eggs with Added Yolks or Whole Egg Blends</b>	<b>Whole Eggs<sup>(3)</sup> or Yolks<sup>(3)</sup></b>	<b>Dried Yellow Egg Products</b>	<b>Spray Dried Egg Whites<sup>(1)</sup></b>	<b>Pan Dried Egg Whites</b>	<b>Total</b>
<b>1995-2013</b>	0.54 (34/6,317) <sup>(4)</sup>	0.25 (21/8,536)	0.21 (7/3,378)	0.52 (33/6,401)	0.50 (12/2,413)	0.09 (2/2,248)	0.00 (0/207)	0.37 (109/29,500)

\*Beginning with CY2008, annual microbiological results are reported by sample collection date as opposed to analysis end date to align the FSIS activities with those of their federal partners and to standardize reporting of yearly and quarterly results from the various microbiological verification programs. The results from 2008 onward cannot be compared with results from previous years because of the change in reporting.

<sup>(1)</sup>With or without added ingredients.

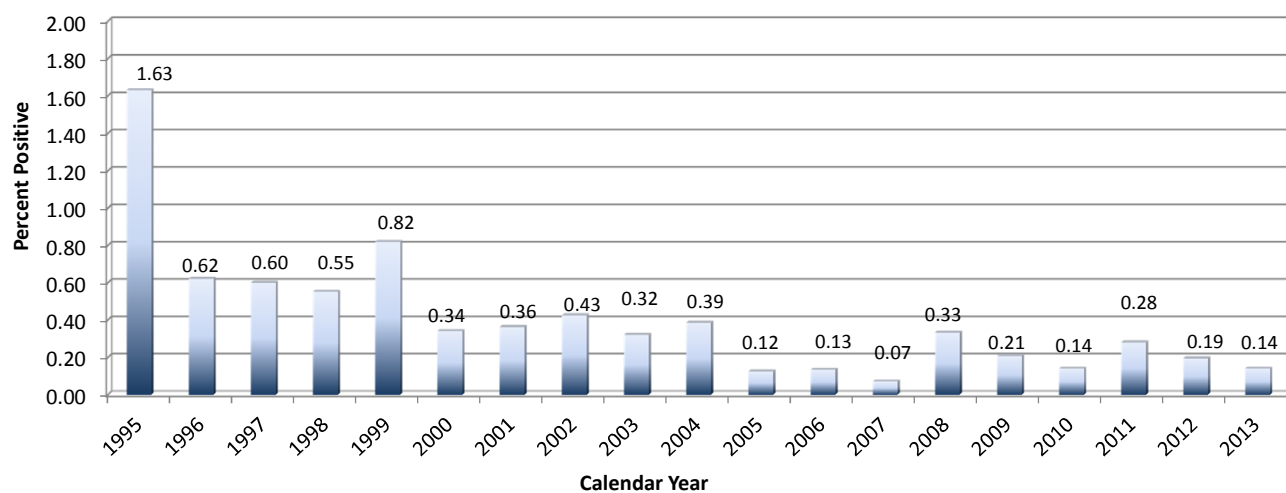
<sup>(2)</sup>With less than 2% added ingredients other than salt or sugar.

<sup>(3)</sup>With more than 2% salt or sugar added.

<sup>(4)</sup>(Number positive/number analyzed x 100) in 100 grams of tested product.

Note: For convenient viewing, Table 1 has been divided into different CY time ranges.

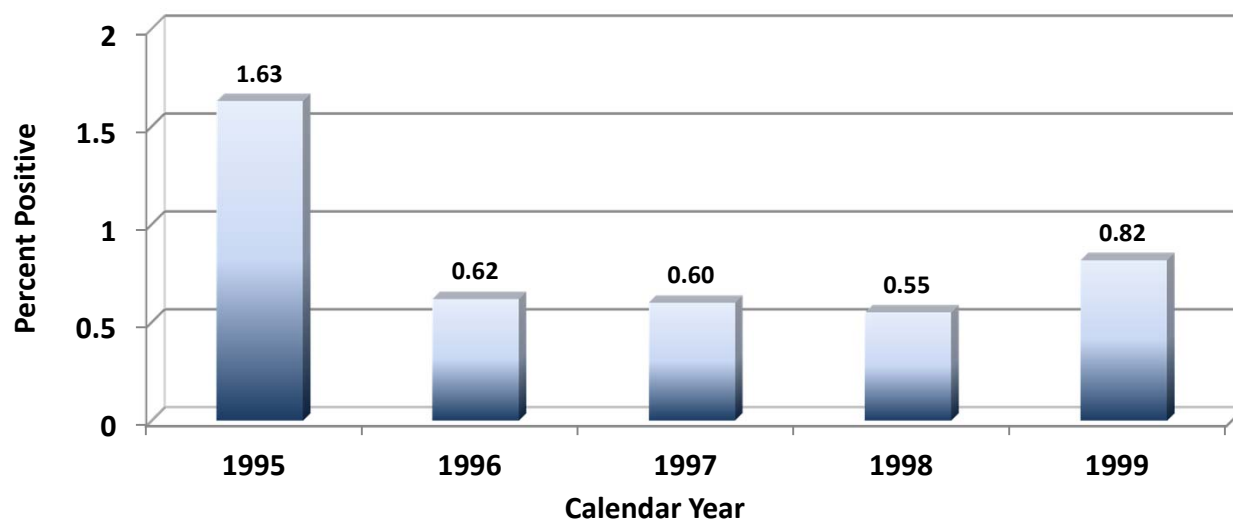
**Figure 1a. *Salmonella* in Pasteurized Egg Products  
1995-2013\***



\*Beginning with CY2008, annual microbiological results are reported by sample collection date as opposed to analysis end date to align FSIS activities with those of their federal partners and to standardize reporting of yearly and quarterly results from the various microbiological verification programs. The results from 2008 onward cannot be compared with results from previous years because of the change in reporting.

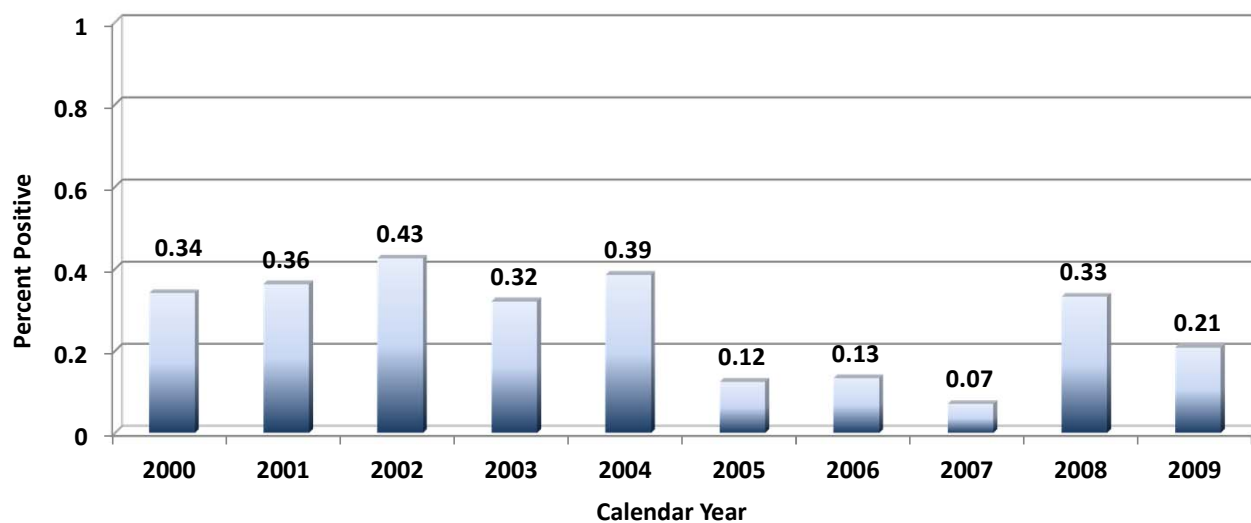
Note: For convenient viewing, Figure 1a has been divided into different CY time ranges.

**Figure 1b. *Salmonella* in Pasteurized Egg Products  
CY 1995-1999**



Note: For convenient viewing, Figure 1a has been divided into different CY time ranges.

**Figure 1c. *Salmonella* in Pasteurized Egg Products  
CY 2000-2009\***

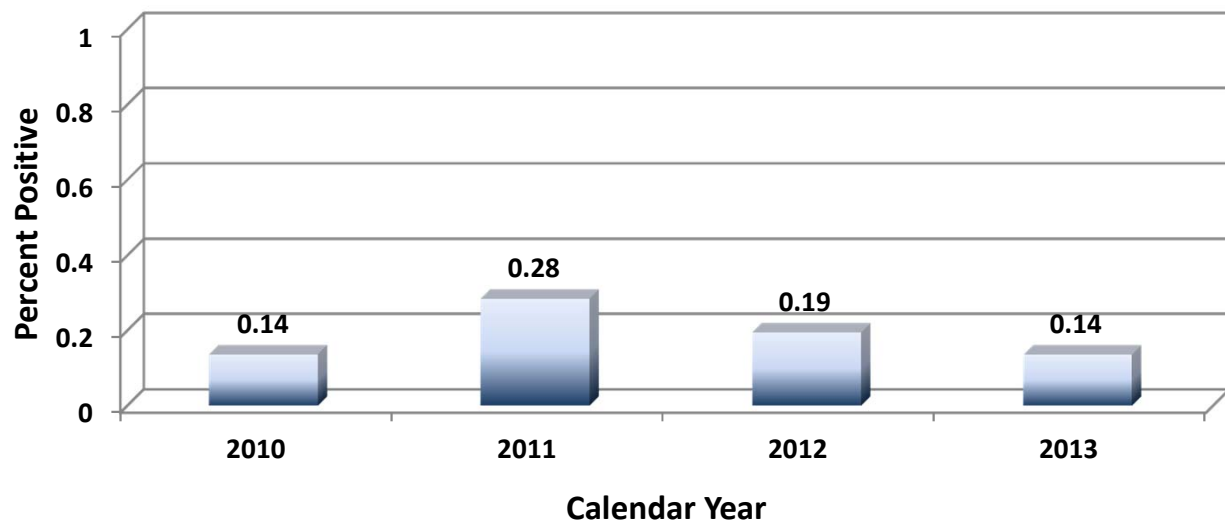


\*Beginning with CY2008, annual microbiological results are reported by sample collection date as opposed to analysis end date to align FSIS activities with those of their federal partners and to standardize reporting of yearly and quarterly results from the various microbiological verification programs. The results from 2008 onward cannot be compared with results from previous years because of the change in reporting.

Note: For convenient viewing, Figure 1a has been divided into different CY time ranges.



**Figure 1d. *Salmonella* in Pasteurized Egg Products  
CY 2010-2013**



Note: For convenient viewing, Figure 1a has been divided into different CY time ranges.

**Table 2a. *Salmonella* in Pasteurized Egg Products Sampling Program:  
Serotypes, CY 1995 - 1999**

Year	1995	1996	1997	1998	1999	Totals
Total Samples Tested	368	2,094	1,998	1,812	1,710	7,982
Total Samples Positive for <i>Salmonella</i>	6	13	12	10	14	55
Total <i>Salmonella</i> Serotyped	5	11	7	8	13	44
Serotype Name						0
Heidelberg	-	1	1	1	5	8
Enteritidis	-	3	2	1	3	9
Typhimurium <sup>#</sup>	5	2	-	1	-	8
Braenderup	-	1	1	3	1	6
Cerro	-	-	-	-	1	1
Mbandaka	-	-	-	-	-	0
Give	-	2	-	1	-	3
Montevideo	-	-	1	-	1	2
Kentucky	-	-	-	-	1	1
Thompson	-	-	-	-	-	0
Untypable	-	1	-	-	-	1
I 4,[5],12:i: -	-	-	-	-	-	0
8,20: -:z6	-	-	-	-	-	0
Agona	-	-	1	-	-	1
Anatum	-	-	-	1	-	1
Hadar	-	-	1	-	-	1
Infantis	-	1	-	-	-	1
Ohio	-	-	-	-	1	1
Oranienburg	-	-	-	-	-	0

<sup>#</sup>Typhimurium includes var. 5- (Formerly var. Copenhagen)

Note: For information on the most commonly identified serotypes causing human infection in the United States see:

<http://www.cdc.gov/ncezid/dfwed/PDFs/salmonella-annual-report-2011-508c.pdf>

Appendix:

<http://www.cdc.gov/ncezid/dfwed/pdfs/salmonella-annual-report-appendices-2011-508c.pdf>

Note: For convenient viewing, Table 2 has been divided into different CY time ranges.

**Table 2b. *Salmonella* in Pasteurized Egg Products Sampling Program: Serotypes, CY 2000 - 2009\***

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Totals
Total Samples Tested	1,761	1,656	1,647	1,560	1,558	1,610	1,501	1,421	1,506	1,441	15,661
Total Samples Positive for <i>Salmonella</i>	6	6	7	5	6	2	2	1	5	3	43
Total <i>Salmonella</i> Serotyped	4	5	7	4	6	2	2	1	5	3	39
Serotype Name											
Heidelberg	1	3	1	1	2	1	-	-	1	1	11
Enteritidis	-	2	-	1	1	1	2	-	1	1	9
Typhimurium <sup>#</sup>	1	-	-	-	1	-	-	-	-	-	2
Braenderup	-	-	1	-	-	-	-	-	-	-	1
Cerro	2	-	-	-	1	-	-	-	1	-	4
Mbandaka	-	-	1	2	1	-	-	-	-	-	4
Give	-	-	-	-	-	-	-	-	-	-	0
Montevideo	-	-	1	-	-	-	-	-	-	-	1
Kentucky	-	-	1	-	-	-	-	-	-	-	1
Thompson	-	-	1	-	-	-	-	1	-	-	2
Untypable	-	-	-	-	-	-	-	-	1	-	1
I 4,[5],12:i: -	-	-	-	-	-	-	-	-	-	1	1
8,20:-:z6	-	-	-	-	-	-	-	-	1	-	1
Agona	-	-	-	-	-	-	-	-	-	-	0
Anatum	-	-	-	-	-	-	-	-	-	-	0
Hadar	-	-	-	-	-	-	-	-	-	-	0
Infantis	-	-	-	-	-	-	-	-	-	-	0
Ohio	-	-	-	-	-	-	-	-	-	-	0
Oranienburg	-	-	1	-	-	-	-	-	-	-	1

\*Beginning with CY2008 all yearly and quarterly microbiological sample results will be posted according to the date the sample was collected. Prior to CY2008 yearly posting of microbiological data results was based upon the sample analysis completion date. For this reason, data from CY2008 can not be directly compared to CY2007 data and prior years' data.

<sup>#</sup>Typhimurium includes var. 5- (Formerly var. Copenhagen)

Note: For information on the most commonly identified serotypes causing human infection in the United States see

<http://www.cdc.gov/ncezid/dfwed/PDFs/salmonella-annual-report-2011-508c.pdf>

Appendix:

<http://www.cdc.gov/ncezid/dfwed/pdfs/salmonella-annual-report-appendices-2011-508c.pdf>

Note: For convenient viewing, Table 2 has been divided into different CY time ranges.

**Table 2c. *Salmonella* in Pasteurized Egg Products Testing Program: Serotypes, CY 2010-2013**

Year	2010	2011	2012	2013	Totals
Total Samples Tested	1,429	1,409	1,544	1,475	5,857
Total Samples Positive for <i>Salmonella</i>	2	4	3	2	11
Total <i>Salmonella</i> Serotyped	2	4	3	2	11
					0
Serotype Name					0
Heidelberg	-	1	2	2	5
Enteritidis	1	-	-	-	1
Typhimurium <sup>#</sup>	-	-	-	-	0
Braenderup	1	1	1	-	3
Cerro	-	-	-	-	0
Mbandaka	-	-	-	-	0
Give	-	-	-	-	0
Montevideo	-	-	-	-	0
Kentucky	-	-	-	-	0
Thompson	-	1	-	-	1
Untypable	-	-	-	-	0
I 4,[5],12:i: -	-	-	-	-	0
8,20:-:z6	-	-	-	-	0
Agona	-	-	-	-	0
Anatum	-	-	-	-	0
Hadar	-	-	-	-	0
Infantis	-	1	-	-	1
Ohio	-	-	-	-	0
Oranienburg	-	-	-	-	0

<sup>#</sup>**Typhimurium includes var. 5- (Formerly var. Copenhagen)**

Note: For information on the most commonly identified serotypes causing human infection in the United States see:

<http://www.cdc.gov/ncezid/dfwed/PDFs/salmonella-annual-report-2011->

Appendix:

<http://www.cdc.gov/ncezid/dfwed/pdfs/salmonella-annual-report-appendices-2011-508c.pdf>

Note: For convenient viewing, Table 2 has been divided into different CY time ranges.

**Table 2d. *Salmonella* in Pasteurized Egg Products Testing Program: Serotypes, CY 1995 - 2013\***

Year	Totals
Total Samples Tested	29,500
Total Samples Positive for <i>Salmonella</i>	109
Total <i>Salmonella</i> Serotyped	92
Serotype Name	
Heidelberg	24
Enteritidis	19
Typhimurium <sup>#</sup>	10
Braenderup	10
Cerro	5
Mbandaka	4
Give	3
Montevideo	3
Kentucky	2
Thompson	3
Untypable	2
I 4,[5],12:i: -	1
8,20: -:z6	1
Agona	1
Anatum	1
Hadar	1
Infantis	2
Ohio	1
Oranienburg	1

\*Beginning with CY2008 all yearly and quarterly microbiological sample results will be posted according to the date the sample was collected. Prior to CY2008 yearly posting of microbiological data results was based upon the sample analysis completion date. For this reason, data from CY2008 can not be directly compared to CY2007 data and prior years' data.

<sup>#</sup>Typhimurium includes var. 5- (Formerly var. Copenhagen)

Note: For information on the most commonly identified serotypes causing human infection in the United States see:

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